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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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VIDAS, ARRETT & STEINKRAUS, P.A.
6109 BLUE CIRCLE DRIVE
SUITE 2000
MINNETONKA, MN 55343-9185

EXAMINER
PARSONS, THOMAS H

ART UNIT	PAPER NUMBER
1745	4

DATE MAILED: 08/06/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

mk-4

Office Action Summary	Application N .	Applicant(s)	
	10/004,337	TROZERA, THOMAS	
	Examiner	Art Unit	
	Thomas H Parsons	1745	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

P riod for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *01 November 2001* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-50* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-50* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *01 November 2001* is/are: a)☐ accepted or b)☒ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *2* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities:

Page 1:

Line 2: suggest changing "currently pending before the U.S. PTO" to --, now U.S. Patent No. 6,475,233,--; and,

Line 3: suggest changing "currently pending before the U.S. PTO" to --, now U.S. Patent No. 6,545,748,--.

Page 5:

Line 12: suggest changing "eletctro-chemical" to --electro-chemical--.

Page 6:

Line 13: suggest changing "illustrations" to --illustration--.

Appropriate correction is required.

2. The specification is objected to as failing to provide proper antecedent basis for the claimed subject matter. See 37 CFR 1.75(d)(1) and MPEP § 608.01(o). Correction of the following is required:

The specification is objected to as failing to provide proper antecedent basis for the subject matter set forth in claims 2 and 18. Accordingly, the Examiner suggests that the specification be amended where appropriate so to provide the proper antecedent basis.

Drawings

3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference sign(s) not mentioned in the description: "78" as shown in Figure 6B. A proposed drawing correction, corrected drawings, or amendment to the specification to add the reference sign(s) in the description, are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Double Patenting

4. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970);and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

5. Claims 1, 3-17, and 19-50 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 3-17, and 19-50 of U.S. Patent No. 5,902,475 in view of Anderson et al. (6,391,502).

Claim 1: U.S. Patent No. 5,902,475 discloses in claim 1 a stent fabrication method comprising the steps of: (a) coating an outer surface of a metallic tubular member with a photo-sensitive resist resulting in a coated tubular member, (b) Placing said coated tubular member in

an apparatus which simultaneously exposes a selected portion and shields other selected portions of said outer surface of said coated tubular member to a light source, yielding a partially exposed tubular member; (c) Immersing said partially exposed tubular member in a negative resist developer resulting in a treated tubular member; (e) Processing said treated tubular member by electro-chemical etching process to remove metal located in said selected portions of said tubular member shielded from said light source.

U.S. Patent No. 5,902,475 does not disclose a metallic tubular member having an outside surface, an inside surface and an inner lumen and (d) sealing the inner lumen.

Anderson et al. disclose a metallic tubular member having an outside surface, an inside surface and an inner lumen and sealing the inner lumen (col. 2: 37-4, 0Figure 2, step, and col. 6: 22-40).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the method of U.S. Patent No. 5,902,475 by incorporating the step of sealing the inner lumen because Anderson et al. disclose a step of sealing the inner lumen that would have prevented the interior lumen from becoming clogged with photoresist thereby improving the overall photolithography process.

Claim 3: U.S. Patent No. 5,902,475 discloses in claim 3 a stent fabrication method as recited in claim 1, further comprising the step of coating said outer surface of said tubular member with a coupling agent prior to the step of coating said outer surface of said metallic tubular member with said photo-sensitive resist.

Claim 4: U.S. Patent No. 5,902,475 discloses in claim 4 a stent fabrication method as recited in claim 1, further comprising the step of incubating said treated tubular member in a

temperature range, said temperature range being between 100 and 400 degrees Celsius, after the step of immersing said partially exposed tubular member to said negative resist developer.

Claim 5: U.S. Patent No. 5,902,475 discloses in claim 5 a stent fabrication method as recited in claim 1, wherein said exposure of said light source to portions of said coated tubular member is regulated by a pattern imprinted on photographic film.

Claim 6: U.S. Patent No. 5,902,475 discloses in claim 6 a stent fabrication method as recited in claim 2, further comprising the step of heating said tubular member in a temperature range, said temperature range being between 100 and 200 degrees Celsius, after the step of cleaning the tubular member.

Claim 7: U.S. Patent No. 5,902,475 discloses in claim 7 a stent fabrication method as recited in claim 1, wherein said light source has a wavelength within the range of 360 to 440 nanometers.

Claim 8: U.S. Patent No. 5,902,475 discloses in claim 8 a stent fabrication method as recited in claim 1, wherein said light source has a preferred wavelength optimized for the specific photoresist employed.

Claim 9: U.S. Patent No. 5,902,475 discloses in claim 8 a stent fabrication method as recited in claim 3, wherein said coupling agent comprises a class of organo-silane compounds.

Claim 10: U.S. Patent No. 5,902,475 discloses in claim 10 a stent fabrication method as recited claim 1, wherein a plurality of stents are made from a single piece of tubing.

Claim 11: U.S. Patent No. 5,902,475 in claim 11 a stent fabrication method as recited in claim 1, wherein said tubular member is made from a material selected from the group consisting of polymers, stainless steel, titanium, platinum, gold alloys, gold/platinum alloys and tantalum.

Claim 12: U.S. Patent No. 5,902,475discloses in claim 12 a stent fabrication method as recited in claim 1, wherein said electro-chemical etching process employs a solution of phosphoric acid and sulfuric acid.

Claim 13: U.S. Patent No. 5,902,475 discloses in claim 13 a stent fabrication method as recited in claim 1, wherein said electro-chemical etching process employs a solution of ferric chloride.

Claim 14: U.S. Patent No. 5,902,475 discloses in claim 14 a stent fabrication method as recited in claim 1, wherein said electro-chemical etching process employs a solution of potassium cyanide.

Claim 15: U.S. Patent No. 5,902,475 discloses in claim 15 a stent fabrication method as recited in claim 1, wherein said electro-chemical etching process employs a solution sodium of hypochlorite.

Claim 16: U.S. Patent No. 5,902,475 discloses in claim 16 a stent fabrication method as recited in claim 1, wherein said electro-chemical etching process employs a solution of hydrochloric acid and nitric acid.

Claim 17: U.S. Patent No. 5,902,475 discloses in claim 17 a stent fabrication method comprising the steps of: (a) Coating an outer surface of a metallic tubular member with a photo-sensitive resist resulting in a coated tubular member; (b) Placing said coated tubular

member in an apparatus which simultaneously rotates said coated tubular member in conjunction with an advancing photographic film which regulates the exposure of a selected portion and shields other selected portions of said outer surface of said coated tubular member to a light source, yielding a partially exposed tubular member; (c) Immersing said partially exposed tubular member in a negative resist developer resulting in a treated tubular member; (e) Processing the treated tubular member by chemical etching to remove a portion of uncovered metal.

U.S. Patent No. 5,902,475 does not disclose a metallic tubular member having an outside surface, an inside surface and an inner lumen and (d) sealing the inner lumen.

Anderson et al. disclose a metallic tubular member having an outside surface, an inside surface and an inner lumen and sealing the inner lumen (col. 2: 37-4, 0Figure 2, step, and col. 6: 22-40).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the method of U.S. Patent No. 5,902,475 by incorporating the step of sealing the inner lumen because Anderson et al. disclose a step of sealing the inner lumen that would have prevented the interior lumen from becoming clogged with photoresist thereby improving the overall photolithography process.

Claim 19: U.S. Patent No. 5,902,475 discloses in claim 19 a stent fabrication method as recited in claim 17, further comprising the step of coating said outer surface of said tubular member with a coupling agent prior to the step of coating said outer surface of said metallic tubular member with said photo-sensitive resist material.

Claim 20: U.S. Patent No. 5,902,475 discloses in claim 20 a stent fabrication method as recited in claim 17, further comprising the step of incubating said treated tubular member in a temperature range, said temperature range being between 100 and 400 degrees Celsius, after the step of immersing said partially exposed tubular member to the negative resist developer.

Claim 21: U.S. Patent No. 5,902,475 discloses in claim 21 a stent fabrication method as recited in claim 17, wherein said exposure of light source to portions of the stent is regulated by a stent configuration on transparent photographic film.

Claim 22: U.S. Patent No. 5,902,475 discloses in claim 22 a stent fabrication method as recited in claim 18, further comprising the step of heating said tubular member in a temperature range, said temperature range being between 100 and 200 degrees Celsius, after the step of cleaning the tubular member.

Claim 23: U.S. Patent No. 5,902,475 discloses in claim 23 a stent fabrication method as recited in claim 17, wherein said light source has a wavelength within the range of 360 to 440 nanometers.

Claim 24: U.S. Patent No. 5,902,475 discloses in claim 24 a stent fabrication method as recited in claim 17, wherein said light source has a preferred wavelength optimized for the specific photoresist employed.

Claim 25: U.S. Patent No. 5,902,475 discloses in claim 25 a stent fabrication method as recited in claim 19, wherein said coupling agent comprises a class of organo-silane compounds.

Claim 26: U.S. Patent No. 5,902,475 discloses in claim 26 a stent fabrication method as recited claim 17, wherein a plurality of stents are made from a single piece of tubing.

Claim 27: U.S. Patent No. 5,902,475 discloses in claim 27 a stent fabrication method as recited in claim 17, wherein said tubular member is made from a material selected from the group consisting of polymers, stainless steel, titanium, platinum, gold alloys, gold/platinum alloys and tantalum.

Claim 28: U.S. Patent No. 5,902,475 discloses in claim 28 a stent fabrication method as recited in claim 17, wherein said electro-chemical etching process employs a solution of phosphoric acid and sulfuric acid.

Claim 29: U.S. Patent No. 5,902,475 discloses in claim 29 a stent fabrication method as recited in claim 17, wherein said electro-chemical etching process employs a solution of ferric chloride.

Claim 30: U.S. Patent No. 5,902,475 discloses in claim 30 a stent fabrication method as recited in claim 17, wherein said electro-chemical etching process employs a solution of potassium cyanide.

Claim 31: U.S. Patent No. 5,902,475 discloses in claim 31 a stent fabrication method as recited in claim 17, wherein said electro-chemical etching process employs a solution of sodium hypochlorite.

Claim 32: U.S. Patent No. 5,902,475 discloses in claim 32 a stent fabrication method as recited in claim 17, wherein said electro-chemical etching process employs a solution of hydrochloric acid and nitric acid.

Claim 33: U.S. Patent No. 5,902,475 discloses in claim 33 a stent fabrication method comprising the steps of: (a) Coating an outer surface of a metallic tubular member with a protective polymeric coating resulting in a coated tubular member; (b) Placing said coated

tubular member in an apparatus which simultaneously exposes a selected portion and shields other selected portions of said outer surface of said coated tubular member to a light source, resulting in some polymeric coating exposed and some polymeric coating unexposed, yielding a partially exposed tubular member; (c) Immersing said partially exposed tubular member in a solvent for selectively removing unexposed polymeric coating resulting in a treated tubular member; (e) Processing said treated tubular member by electro-chemical etching process to remove metal located in said selected portions of said tubular member shielded from said light source.

U.S. Patent No. 5,902,475 does not disclose a metallic tubular member having an outside surface, an inside surface and an inner lumen and (d) sealing the inner lumen.

Anderson et al. disclose a metallic tubular member having an outside surface, an inside surface and an inner lumen and sealing the inner lumen (col. 2: 37-4, 0Figure 2, step, and col. 6: 22-40).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the method of U.S. Patent No. 5,902,475 by incorporating the step of sealing the inner lumen because Anderson et al. disclose a step of sealing the inner lumen that would have prevented the interior lumen from becoming clogged with photoresist thereby improving the overall photolithography process.

Claim 34: U.S. Patent No. 5,902,475 discloses in claim 34 a stent fabrication method as recited in claim 33, wherein said protective polymeric coating comprises a class of photo-sensitive resists.

Claim 35: U.S. Patent No. 5,902,475 discloses in claim 35 a stent fabrication method as recited in claim 33, wherein said solvent for selectively removing unexposed polymeric coating comprises a class of negative resist developers.

Claim 36: U.S. Patent No. 5,902,475 discloses in claim 36 a stent fabrication method as recited in claim 33, further comprising the step of cleaning said tubular member prior to the step of coating said outer surface of said metallic tubular member with said protective polymeric coating.

Claim 37: U.S. Patent No. 5,902,475 discloses in claim 37 a stent fabrication method as recited in claim 33, further comprising the step of coating said outer surface of said tubular member with a coupling agent prior to the step of coating said outer surface of said metallic tubular member with said protective polymeric coating.

Claim 38: U.S. Patent No. 5,902,475 discloses in claim 38 a stent fabrication method as recited in claim 33, further comprising the step of incubating said treated tubular member in a temperature range, said temperature range being between 100 and 400 degrees Celsius, after the step of immersing said partially exposed tubular member to said solvent for selectively removing unexposed polymeric coating.

Claim 39: U.S. Patent No. 5,902,475 discloses in claim 39 a stent fabrication method as recited in claim 33, wherein said exposure of said light source to portions of said coated tubular member is regulated by a pattern imprinted on photographic film.

Claim 40: U.S. Patent No. 5,902,475 discloses in claim 40 a stent fabrication method as recited in claim 36, further comprising the step of heating said tubular member in a temperature range, said temperature range being between 100 and 200 degrees Celsius, after the step of

cleaning the tubular member.

Claim 41: U.S. Patent No. 5,902,475 discloses in claim 41 a stent fabrication method as recited in claim 33, wherein said light source has a wavelength within the range of 360 to 440 nanometers with a preferred wavelength of 390 nanometers.

Claim 42: U.S. Patent No. 5,902,475 discloses in claim 42 a stent fabrication method as recited in claim 33, wherein said light source has a preferred wavelength optimized for the specific photoresist employed.

Claim 43: U.S. Patent No. 5,902,475 discloses in claim 43 a stent fabrication method as recited in claim 37, wherein said coupling agent comprises a class of organo-silane compounds.

Claim 44: U.S. Patent No. 5,902,475 discloses in claim 44 a stent fabrication method as recited claim 33, wherein a plurality of stents are made from a single piece of tubing.

Claim 45: U.S. Patent No. 5,902,475 discloses in claim 45 a stent fabrication method as recited in claim 33, wherein said tubular member is made from a material selected from the group consisting of polymers, stainless steel, titanium, platinum, gold alloys, gold/platinum alloys and tantalum.

Claim 46: U.S. Patent No. 5,902,475 discloses in claim 46 a stent fabrication method as recited in claim 33, wherein said electro-chemical etching process employs a solution of phosphoric acid and sulfuric acid.

Claim 47: U.S. Patent No. 5,902,475 discloses in claim 47 a stent fabrication method as recited in claim 33, wherein said electro-chemical etching process employs a solution of ferric chloride.

Claim 48: U.S. Patent No. 5,902,475 discloses in claim 48 a stent fabrication method as recited in claim 33, wherein said electro-chemical etching process employs a solution of potassium cyanide.

Claim 49: U.S. Patent No. 5,902,475 discloses in claim 49 a stent fabrication method as recited in claim 33, wherein said electro-chemical etching process employs a solution of sodium hypochloride.

Claim 50: U.S. Patent No. 5,902,475 discloses in claim 50 a stent fabrication method as recited in claim 33, wherein said electro-chemical etching process employs a solution of hydrochloric acid and nitric acid.

6. Claims 2 and 18 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 and 3-17 of U.S. Patent No. 5,902,475 in view of Anderson et al. (6,542,218) as applied to claims 1 and 17 above, and further in view of Lucas et al. (EP0780485).

U.S. Patent No. 5,902,475 and Anderson et al. are as applied, argued and disclosed above, and incorporated herein.

The '475 Patent combination does not disclose the step of processing the tubular member with a plasma etch treatment prior to the step of coating the outer surface of the metallic tubular member with photoresist.

Lucas et al. disclose the step of processing the tubular member with a plasma etch treatment prior to the step of coating the outer surface of the metallic tubular member (abs.).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the method of the '475 Patent combination with the plasma etch treatment step of Lucas et al. because Lucas et al. teach plasma etch treatment step prior to coating that would have eliminated the handling and regeneration problems of pickling (cleaning) solutions and the adhesion of a subsequent coating in a process carried out continuously at high speed and very efficiently thereby improving overall product quality, throughput and providing cost advantages.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thomas H Parsons whose telephone number is (703) 306-9072. The examiner can normally be reached on M-F (7:00-4:30) First Friday Off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Pat Ryan can be reached on (703) 308-2383. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

Thomas H Parsons
Examiner
Art Unit 1745

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July 29, 2003

Patrick Ryan
Supervisory Patent Examiner
Technology Center 1700